

**METHODS, SYSTEMS AND COMPUTER PROGRAMS FOR  
DECONVOLVING THE SPECTRAL CONTRIBUTION OF CHEMICAL  
CONSTITUENTS WITH OVERLAPPING SIGNALS**

5       Methods, systems and computer programs are configured to determine the presence of and/or a measurement for a plurality of constituents in a composite signal with closely correlated chemical constituents having overlapping signal lineshapes extending about a spectrum of interest obtained from a target sample undergoing analysis.